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c.—THERAPEUTICS OF THE NERVOUS SYSTEM AND MIND.

OXALATE OF CERIUM IN PERTUSSIS.—Dr. Benj. Morje, Physician to the German Dispensary, N. Y., reports, *N. Y. Med. Record*, July 19, his success with oxalate of cerium in the spasmodic stage of whooping cough. He was induced to try it from the recommendation of Dr. Thos. Clark, in the *Practitioner*, of its value in chronic cough. He reports three of the ten cases in which he has used it successfully—seven males and three females, of ages ranging from one to seven years. The dose was from one-half a grain to three grains according to circumstances, once a day, before breakfast. The practice was to continue the medication a week after the last spasmodic coughing, so as to obviate any relapse.

He concludes from these ten cases, which, though a small number, are yet enough, he thinks, to justify some deductions, that:

1. It decreases the attacks, and thereby reduces the violence of the disease, often checking it instantly.
2. It is easily administered, as only one dose is required in twenty-four hours.
3. Nocturnal quietude is insured.
4. The possibility of complications is lessened.

SALICYLIC ACID AND SALICYLATE OF SODA IN SCIATICA AND NEURALGIA.—Dr. S. L. Abbot, *Boston Medical and Surgical Journal*, July 17, gives an account of three cases of sciatica, and three of acute facial neuralgia, in which salicylic acid and salicylate of soda were employed with success. He says, in conclusion: "These cases seem to show that we have in salicylic acid and its compounds as valuable a remedy in acute neuralgia as in acute rheumatism. Perhaps they indicate a closer affinity between these diseases than has been generally suspected. Two of the patients had had attacks of rheumatism. The cases, with the exception of the third case of sciatica, were all severe, and nothing could be more satisfactory than the very prompt and efficient relief which followed the exhibition of the remedy. In cases of a more chronic character, my experience does not justify me in expecting such complete relief by these remedies alone. A limited experience seems to show that such patients do not tolerate them so well, perhaps on account of the debility, which is so marked a feature in these cases."

THE PHYSIOLOGICAL ACTION OF PLATINUM.—Platinum is one of the metals whose action on the living organism we know very little about. Therapeutically, it is at present nowhere; and yet some recent researches, made by Herr Kebler, at Strasburg, show that its properties are, in some respects, peculiar. The salt used in these experiments was the double chloride of platinum and sodium; a solution which, containing 0.050 platinum in one cubic centimetre, was injected, in varying quantities, under the skin of frogs, and into the veins of warm-blooded animals. In frogs, three to fifty milligrammes of the metal first caused increased general reflex irritability, and then the voluntary movements became paralyzed, while spontaneous convulsive twitchings of the limbs, or of certain groups of muscles, occurred, which ceased on division of the medulla oblongata. In rabbits, twenty-five to fifty milligrammes of platinum, and in dogs, forty-five to ninety-five caused profuse diarrhœa when injected into the jugular vein. In dogs, blood generally appeared in the motions, and vomiting was not uncommon. Hyperæmia of the mucous membrane of the stomach and intestine occurred in rabbits; but in dogs all the abdominal viscera were hyperæmic, even the nerve-trunks being involved, while the digestive mucous membrane was softened and infiltrated with blood. The bladder of dogs, poisoned with large doses of platinum, was sometimes ecchymosed. The action of the salt on the circulation mainly showed itself in a continuous fall in the blood-pressure, with scarcely any alteration in the frequency of the pulse. This fall appears to depend entirely on dilatation of the blood-vessels, especially those of the abdomen, owing to paralysis of the terminations of their peripheral nerve-fibres. The excessive stagnation of blood in the abdominal vessels, due to their dilatation, Kebler regards as the cause of the morbid phenomena occurring in the digestive tract. He is also inclined to refer the nervous symptoms, met with in frogs, in part, at least, to the vascular dilatation, though unable to exclude the possibility of a direct action of the platinum on the central nervous system. We record these experiments without suggesting in what way they may be made therapeutically serviceable. One thing, however, seems clear, that the peculiar action of platinum was scarcely likely to prove of much value in the treatment of syphilis, the disease in which it has, as yet, been chiefly tried. (*Med. Times and Gazette*, Feb. 8, 1879.) (*Practitioner*, July.)

BROMIDE OF POTASSIUM.—Dr. A. Hughes Bennett, *British Med. Journal*, June 7, concludes his lectures on the analysis of one hundred cases of epilepsy, all of which were treated with the bromides, with the special purpose of testing the remedy in a series of successive and unselected cases.

All general measures requisite were also resorted to, such as looking after the general health, diet, palliating all unfavorable influences of surrounding, etc., as far as possible. The dose given was, as a rule, in the average adult case, thirty grains *ter die*, and a combination of the bromides of potassium and ammonium, twice as much of the former as of the latter, with aromatic spirits of ammonia and water was found a convenient and efficacious prescription. The first dose was taken on arising in the morning, the second in the middle of the day on an empty stomach, and the third the last thing before retiring. Sometimes, if apparently needed, the dose was gradually increased to sixty or even ninety grains three times a day. After two or three months the quantity was gradually diminished to the smallest quantity found efficacious in warding off the paroxysms, and continued at this amount for many months.

We would say here that the above doses are considerably larger than we have ourselves found needful in the great majority of cases of epilepsy.

Dr. Bennett continues as follows. Of the hundred cases treated in this way, it may be stated in general terms that, with only one or two exceptions, the bromides have had the effect of materially modifying the frequency and severity of the epileptic seizures. At the same time, opportunity was not afforded in all of these to test the efficacy of the treatment for a sufficient length of time. In the following tabular statements, the minimum period during which any patient was under observation and treatment was six months, and this may be considered ample time to demonstrate the therapeutical action of the drugs on the attacks. Therefore, in forty cases under treatment at least six months, and most of them for a longer period, the following tables indicate: 1. The average number of attacks per month prior to treatment, and 2. The average number of attacks during six months of treatment by the bromides.

EPILEPSIA GRAVIOR.

No. of Cases	Average number of attacks per month before treatment.	Average number of attacks per month after treatment.	Number of attacks during six months of treatment.	No. of Cases	Average number of attacks per month before treatment.	Average number of attacks per month after treatment.	Number of attacks during six months of treatment
1	180	60	--	17	4	0	5
2	120	4	--	18	4	2	--
3	60	8	--	19	4	2	--
4	30	0	7	20	2	0	0
5	30	4	--	21	2	0	2
6	16	2	--	22	2	0	4
7	12	1	--	23	2	1	--
8	12	2	--	24	1	0	0
9	8	0	0	25	1	0	0
10	8	0	0	26	1	0	0
11	8	0	4	27	1	0	1
12	8	1	--	28	1	0	2
13	5	0	0	29	1	0	2
14	4	0	0	30	1	0	4
15	4	0	1	31	1	1	--
16	4	0	2	32	1	2	--

EPILEPSIA MITIOR.

33	900	30	--	37	30	6	0
34	300	3	--	38	30	30	0
35	120	30	--	39	20	0	4
36	60	0	0	40	1	0	1

A consideration of these tables demonstrates the very remarkable influence of the bromides on epileptic attacks. In no less than 92.5 per cent., the seizures were either entirely arrested during the period of observation, or greatly modified in frequency and severity. In 22.5 per cent., the paroxysms were completely checked during the whole time of treatment, the minimum length of which was six months, and in most for a longer period. For example, case No. 9 was that of a boy aged 12, who had suffered from epilepsia gravior all his life, having had for some time an average of two attacks per week. He was under treatment for nine months, and during that time he did not have a single seizure. Again, case No. 36 was that of a man aged 30, who had suffered from epilepsia mitior for a year, having two or three attacks regularly every day. During six months of treatment, he had no seizures of any kind.

In 70 per cent., although the attacks were not completely arrested, the reduction in their number was in most cases very marked, as will be seen on consulting the tables. For example, case No. 2 was that of a girl aged 19, who had been subject to attacks of epilepsia gravior since childhood, and who for some time past had had four seizures every day. After treatment, the paroxysms were reduced to one a week. Again, case No. 33 was a girl aged 9, who had suffered from epilepsia mitior for five years. She had about thirty attacks every twenty-four hours. Treatment reduced this to one seizure a day. This modification of the frequency of the attacks took place in every proportion, as will be seen in the tables, in the majority of cases, however, being very remarkable. This is all the more apparent when it is remembered that, in the above general estimate, no account is taken of special adverse circumstances, such as very chronic cases, hereditary transmission, co-existence with disease of the nervous system, and other varying conditions, the accompaniments or causes of the attacks. Another point which may be mentioned is that, so far as the limited number of cases of the *petit mal* permit us to judge, the benefit derived from treatment is nearly equal to that of the *grand mal*, there being only one case out of eight which received no benefit.

This modification of symptoms, if not scientifically curative, is of the greatest possible importance, and nothing can exceed the advantage accruing both to the patient and his friends, by even the relief of the much dreaded fits. Let us take, as an example of this, case 10. This was a young lady, aged 12, who, while at the Cape, was supposed to have had a sunstroke when fourteen months old. Since that time, she had suffered from constant attacks of the severest forms of epilepsia gravior. The minimum frequency of these seizures had been two a week, but for months together she had had several every day.

About every three months, she fell into a sort of *status epilepticus*, in which she had a succession of fits lasting for twenty-four or more hours. It is difficult to describe the distress, anxiety, and constant alarm produced in a private family by one of its members being in this condition. In the present instance, besides general treatment, twelve grains of bromide of potassium were administered three times a day, and the patient has taken this continuously for ten months. During this time she has not had a single seizure except during one week, when, the medicine having been discontinued, she had three attacks. The general health has greatly improved, the patient has grown stout and tall, and menstruation has occurred for the first time, and altogether she is more healthy and robust than she has been for years. This child is not cured, but it is unnecessary to point out the benefit derived both by her friends and herself from even the modification of the paroxysms.

Of the forty cases which compose the tables, in only three were there no beneficial changes on the attacks as a result of treatment. There was nothing special in any of these to indicate why the remedies should have failed, as the following notes may show:

Case No. 31 was a woman aged 25; suffering from epilepsy for six years. Attacks of epilepsia gravior came on about once a month; of epilepsia mitior, about ten or twelve times a day. She was a very delicate and nervous person; otherwise there was nothing special. Her family was healthy.

Case No. 32 was a man aged 32. He had had epilepsy for ten years; attacks of epilepsia gravior once a month—otherwise, nothing special. His family was healthy.

Case No. 38, a man aged 37. He had had epilepsy for ten years. Attacks of epilepsia mitior came on once a day. He was a delicate, weak person. His family was healthy.

Not only do the bromides materially modify the frequency of epileptic attacks, but they often diminish the severity of those which occur. They also improve, in many respects, the general health; and persons who suffered from headache, nervousness, and other ailments, are often greatly relieved in these respects.

The administration of the drugs may arrest the seizures for many months, and the moment they are discontinued, the attacks at once return, indicating that it is these agents which keep the paroxysms in abeyance, and that their action is not permanent.

What effects has a prolonged use of the bromides on the general health? Of the forty cases, which for a period of at least six months were continuously under the influence of these drugs, the following gives a general idea of the results:

General health not affected	25
Symptoms of bromism	15
Enfeebled or weakened body	10
Depressed or weakened mind	8
Eruption	6
Died	1

It will thus be seen that, in 62.5 per cent. of cases, the prolonged use of the bromides, sufficient to ward off or greatly modify the epileptic attacks, did not produce any physiological effects, or in any way influence the general health. In 35 per cent. some symptoms of bromism were produced, namely: in 25 per cent. there were weakness and languor of body, loss of appetite, and the usual physical symptoms; in 20 per cent. there were depression of the mental faculties into dullness, apathy, tendency to sleep, and so on; and in 15 per cent. there were well marked signs of the bromide rash. One patient died while taking large doses, but whether as a result of the remedy or of the disease, it is very difficult to determine. As a rule, however, the symptoms of bromism were slight, and their effects temporary, and rapidly disappeared on discontinuing the drug for a time.

It may be said in conclusion that, in the bromide of potassium, we possess a valuable agent for suppressing the most dangerous symptoms of one of the most terrible maladies to which human flesh is heir; and further experience may enable us, through its influence, to effect a complete cure of the disease itself.

There are other methods of treatment of epilepsy, both by medicinal agents and by derivatives, such as the seton and actual cautery, which I am disposed to believe in some instances of the greatest importance, a consideration of which, space compels me, at present, to postpone.

CURARE IN HYDROPHOBIA.—There have been several reported cures of hydrophobia within the past two or three years; one of the latest is reported by Dr. Ad. Offenberg, Wickrath (Rhein-Preussen), and translated by Dr. S. W. Williams, *N. Y. Med. Record*, Aug. 9:

A servant girl was bitten, on the 28th of July, 1874, in the heel by a Spitz dog, pronounced mad by a veterinary surgeon. Other cases of rabies had occurred in the neighborhood, and the man in whose house she was working died hydrophobic from the effects of a dog-bite only two days after the girl herself was bitten. The wound was treated locally and kept open, and she took remedies popular in the region to prevent hydrophobia. On the sixteenth of October she first gave signs of hydrophobic spasms, which in the course of the night became very pronounced. Injection of .02 (= ⅓ grain) morphia and chloroform inhalation being ineffectual, and the diagnosis of hydrophobia being considered established, Dr. Offenberg began to use curare hypodermically, a solution of the strength of 0.5 : 10 of distilled water (= grs. 7½ : ʒ iiss). The effectiveness of this solution had been previously tested on frogs, and also in two cases of traumatic tetanus.

At first .02 (= ⅓ gr.) was injected without effect, and the dose was repeated in fifteen minutes, with the result of diminishing the general muscular tremor and reducing the pulse between the convulsions, and also of increasing the intervals of these latter. At midnight nearly half a grain ($\frac{6}{13}$) of curare was given, followed by two other similar doses at intervals of an hour, then another in half an hour, at 2.30 a.m. Oct. 17, and in fifty minutes more (3.20 a.m.) still another. The result of all this was considerable improvement in the patient's spirits and general comfort between the spasms, the diminution of their severity and the lengthening of the intervals between them, and, after the last dose, almost complete muscular paralysis, not, however, involving respiration, and cessation of the spasms. During the next day the paralysis disappeared almost entirely, but slight convulsive phenomena reappeared, excited by drinking, swallowing, etc., and spasmodic muscular twitchings, but not serious. The next day or two there occurred temporary paralysis and some occasional slight convulsions, and numerous head symptoms persisted for several days. But from the 25th of October the recovery was gradual and steady. She was discharged from the hospital on the 4th of December, 1874, in good general health, but not strong, and with weakness of the eyes, which had troubled her during the attack. In January, 1875, she resumed her work, though not yet strong, and recovery was still slow. Two years later she was in perfect health.

The dubious point in this case, as in all the cures of this disease that we have seen reported, is the question whether this was an actual or a hysterical case. The fact is stated in the account that the patient was much alarmed as to her condition before she was taken ill, and that her uneasiness persisted even after her recovery. The case has not the conclusive character that it would have were all such moral complications excluded in the history. Still we are inclined to believe that hydrophobia is in all cases very much a mental disease, *i. e.*, the mind is affected, even in the lower animals. There is much to encourage us, therefore, in these later clinical experiences with this fearful disorder.

IN VINO VERITAS.—In the *Vierteljahrschrift für gerichtl. Medicin*, July, Dr. Westphal reports the case of a murderer who was alleged to be partially insane. Among the tests was the administration, on two occasions, of sufficient brandy to make him quite drunk. In this condition of intoxication, he plied him with a number of questions, believing that if his delusions were simulated, he could not keep up the deceit when so much in liquor. As the man still persisted in his insane statements, the expert concluded that he was really demented. (*Med. and Surg. Reporter*, Aug. 9.)

BROMOHYDRATE OF CONIINE.—At the sessions of the Acad. des Sciences, Paris, July 14, 21 and 28 (rep. in *Bull. gen. de Thérap.*, Aug. 15), M. J. L. Prevost read a communication, of which the following are the conclusions drawn from experiments on various species of animals:

1. The paralysis produced by bromohydrate of quinine is the result of the paralysis of the motor nerves, which also lose their excitability.
2. When we interrupt the circulation in the posterior portion of the body of a frog, sparing the nerves, and then introduce, hypodermically, in the back, a dose of from 0.015 to 0.02 of bromohydrate of coniine, the nerves of the posterior members remain excitable, and these posterior limbs react to excitations made on the anterior members above the ligature, they being also paralyzed by the poison.
3. This experiment is made more striking by strychnizing the animal; in that case we can observe, simultaneously, the effects of the two poisons on the same animal.
4. The pneumogastric is paralyzed before the other nerves, and its excitability reappears more promptly than that of the other nerves, during the period of the elimination of the poison.
5. The urinary, salivary and lachrymal secretions are excited by bromohydrate of coniine.
6. I have been able to experimentally determine the passage of the drug in the urine. The urine of a cat, poisoned with bromohydrate of coniine, evaporated in a warm bath to a syrupy consistence, and injected under the

skin in several frogs, produced in these animals the characteristic symptoms of poisoning by bromohydrate of coniine.

7. The glandular nerves still preserve their excitability, and cause secretion when electrized. After the vagi and the nerves of the striped muscles have lost their excitability, the electric excitation of the cervical sympathetic and the tympanico-lingual, causes a flow of saliva. The excitation of the peripheral end of the nerves of the fore-limb produced secretion of sweat in the palmar surface of a cat's paw, after it had failed to arouse muscular contractions.

8. In cold-blooded animals, poisoned by bromohydrate of quinine, and subjected to artificial respiration, the heart showed great resisting power, dying last of all; it continued to pulsate longer than a normal heart, after cessation of artificial respiration, or when separated from the body.

In rabbits and cats, the direct electrization of the heart by a strong induction current, did not produce its paralysis when poisoning was carried to the point of complete loss of the excitability of the sciatic nerve. This experiment failed in a cock. When in rabbits the excitability of the sciatic was not completely destroyed, electrization of the heart would produce paralysis; but repeated attempts were needed to produce this effect.

9. It is very doubtful whether the nerve-centres are directly affected by bromohydrate of coniine. The convulsions observed in warm-blooded animals in the later period of the poisoning, are the result of the asphyxia due to the paralysis of the mechanical factors of respiration. These convulsions may be avoided by means of artificial respiration.

10. Muscular contractility is not at all affected by bromohydrate of coniine.

THE PNEUMOGASTRIC AND THE ACTION OF DIGITALINE.—At the session of the Acad. des Sciences, Paris, June 2d, M. Ch. Robin presented a communication by M. Cadiat, on the influence of the pneumogastric, and the action of digitaline on the movements of the heart in the squaloids, which is thus reported in *L'Union Médicale:*

"Certain of the squalidæ, among others the roussette (*Scyllium caniculum, H. D.*), preserve an excessive nervous excitability long after death, together with simultaneous violent cardiac pulsations, which last ten or twelve hours after cessation of all spontaneous movement. This animal seems, therefore, to offer very favorable conditions for studying the action of the pneumogastric and the effects of digitaline. The results I have obtained are presented in evidence.

1. "The pulsations of the heart, which in the conditions of artificial respiration in which I had placed the sharks for these experiments, rise to ten or twelve a minute, increase rapidly after the section of one or both pneumogastrics, or the destruction of the medulla, to twenty-eight or thirty in the same space of time.

2. "If we cut the pneumogastric between the cranium and the organ of the branchial nerves and then excite the peripheral portion, we obtain an immediate arrest in diastole, whatever be the method of excitation. The excitation of the central end has no effect on the cardiac movements.

"This experiment may be repeated for hours on the same animal, either before or after death, that is, after disappearance of all voluntary movements.

3. "The pneumogastric giving out, after it leaves the cranium, as many branches as there are branchial rays, the action of arrest of the heart is so much the more energetic as we apply the excitation to a part including the largest number of these branches. With only one branchial filament we can hardly arrest the heart. The nerve of the third branchial pair seems to have the most effect.

4. "When the excitability of the pneumogastric is exhausted, its excitation does not stop the heart."

Action of Digitaline.—The experiments with digitaline confirm incontestably the results of M. Bröhm and M. Vulpian.

In opposition to Traube, who thought that digitalis acted on the heart through the nervous system, M. Vulpian recognized the fact that digitalis, like the *Upas antiar* was a direct cardiac poison; but many objections may be raised to the experiments he reports in support of this view. In one of them in fact, the heart was arrested in systole under the influence of digitaline, but it is not said that its nervous excitability still persisted at the time. In another, of two animals, the one not yet poisoned succumbed with cardiac arrest from the mere effect of the operation, before absorbing any digitaline. These experiments upon sharks are much more conclusive on account of the great vitality of the animals.

1. "I opened the pericardium of a roussette (*Scyllium caniculum*) and cut the pneumogastric. The heart beat 25 per minute; some drops of solution of digitaline were then dropped on the heart. The movements of the organ were at first quickened, then the diastoles gradually diminished; the heart appeared to sink down into the pericardium. Suddenly it stopped in systole in a sort of tetanic condition, and electrical excitation could arouse no pulsation.

"But the animal had not yet died; the nerves and muscles were still excitable; it struggled violently when lifted and put into a basin, the heart being absolutely quiet; it continued its natatory movements for over half an hour.

2. "I repeated this experiment on another of these sharks, but instead of cutting the pneumogastric, I destroyed the medulla. This mutilation also accelerated the cardiac movements, which became as frequent as when the pneumogastric was cut. A few drops of digitaline are poured on the pericardium. The heart continued to beat; then suddenly it ceased in systole.

"The spontaneous movements still continued.

3. "I cut the left pneumogastric one day, and the next day cut the right also. The excitation of one of these nerves did not arrest the heart any more, a fact due, doubtless, to the accelerating influence of the divided symmetrical nerve.

"A large dose of digitaline was then injected into the peritoneum; then, a quarter of an hour later, I opened the pericardium. The heart-pulse was twenty-six to thirty-one per minute, but the diastoles gradually diminished and the heart suddenly stopped in systole.

"The nervous system was still excitable, as the animal swam when placed in water.

4. "In another of these sharks, I commenced with a strong injection of digitaline. Ten minutes later I laid bare the pneumogastric and the heart. The latter was absolutely immobile in systole; but at this moment the excitation caused progressively a dilatation and excessive repletion of the organ. As we might attribute this to the influence of muscular contractions, I passed a current along the cord, causing violent motions but no cardiac dilatation.

"This experiment shows that the paralysant action of the pneumogastric is sufficient to still arouse a tetanized heart.

"The heart having been entirely quiet and in systole for half an hour, we put the animal in water and it at once traversed a space of two or three metres.

"*Conclusion:* Digitaline administered to animals in toxic doses, acts as a cardiac poison. It acts directly on this organ, causing, as many authors have already stated, a tetanization of the ventricle and diastole of the auricle. It has no action on either the nerve centres, the peripheral nerves or the muscles."

NUX VOMICA AS A REMEDY FOR VERTIGO.—Dr. Mader, *Wiener Med. Blätter*, 8–13, II. Jahrg. (*Deutsch Med. Wochenschr.*, July 19.)

The author has employed extract of nux vomica (0.1—0.2 per diem, divided into two doses,) in a considerable number of cases for the relief of vertigo. Its remarkable effects are shown in twenty-six clinical histories. For theoretical explanation these must be divided into two classes. On the one hand we have a morbid affection in the sensory sphere with secondary motor disorders, and then these latter may occur primarily as the motor association centres are morbidly irritated and produce slight unconscious active movements, of which we are only passively conscious. That nux vomica, as it appears, acts directly in those cases in which the motor sphere is involved, is easily understood from its known physiological peculiarities. If one now understands that the cause of the irritation of the motor region of the nervous system is usually from a local disorder of the circulation, for instance, a hyperæmia, then the action of the preparation in question would indicate that it contracts the vessels. The many weak points for attack this explanation may also afford, as the author himself admits, should have the result to excite further experiments with the agent.

HYPODERMIC INJECTION OF FOWLER'S SOLUTION IN CHOREA OF CHILDREN.—M. Henri Garin gives in a thesis the result of the treatment practiced by Doctor L. Perroud, of Lyons.

The method practiced was to inject four or five drops of Fowler's solution, as a rule, every two or three days, sometimes, however, oftener.

The reasons which lead the author to prefer this method of treating the disease are:

I. Because the gastric disturbances, so troublesome when the medicine is given by the stomach, are avoided.

II. Because the good effects of the drug are generally obtained more rapidly.

III. Because it is only necessary to employ small doses, administered every two or three days.

The irritation at the point of injection is trifling. Sometimes on account of idiosyncrasy, the arsenic is not tolerated, and symptoms of arsenical poisoning are observed. But these cases are rare, especially in children, who, as a rule, bear arsenic very well. Under the influence of this treatment, rapid improvement is the rule in all cases.

This amelioration of the symptoms cannot be ascribed to acupuncture, as the injection of water does not have the same result.

As the chorea becomes better the patient gains flesh, and the solid matter excreted by the kidneys diminished in quantity.

By the use of arsenical injections 16 patients were cured, after an average of 32 days of treatment, and 18 hypodermic injections.

These 10 cases were put on a purely arsenical treatment, and they were all simple and recent cases. In 13 other cases submitted to the treatment, but which had been under other treatment, 10 were cured. The time necessary to effect a cure was more than in the cases first mentioned. These 13 were, as a rule, old cases and relapses.

From the preceding we can conclude that arsenic is more efficacious in simple and recent cases than in old and inveterate ones, which is contrary to the assertion of Aran, Ziemssen, etc.

The number of cases observed was 33, all girls, ranging in age from 4½ to 14½ years.—*Thése de Lyon*, No. 14.—*Lancet and Clinic.*

THE ACTION OF BRUCINE AND STRYCHNINE ON THE MOTOR NERVES. —Dr. Lautenbach, in the *Medical Times* of August 2d, reaches the following conclusions on the above subject, viz.:

Brucine treated with acetic acid and injected into a Rana temporaria, in the proportion of one part of the alkaloid to about fifteen hundred parts by weight of the frog, produces a non-excitability of the motor nerves through a direct action on these structures.

Brucine treated with hydrochloric acid produces the same effect in the Rana temporaria; but in the Rana esculenta it, in much smaller doses, paralyzes the motor nerves without having previously induced tetanus.

Strychnine treated with acetic or hydrochloric acid produces in the Rana temporaria, paralysis of the motor nerves in one-sixth the dose necessary for brucine to produce the same effect.

The following are the titles of a few recently published articles on the Therapeutics of the Nervous System and Mind:

KENYON, Treatment of Eclampsia with Veratrum Viride, *N. Y. Med. Jour.*, Oct.—BUSEY, Anæsthesia and Hot Water in the Treatment of Torticollis, *N. Y. Med. Rec.*, Sept. 27.—SAVAGE, Hyoscyamine and its Uses, *Jour. of Ment. Science*, July.—SCHAEFFER, Asthma and its Treatment, *Deutsch. Med. Wochenschr.*, No. 32.—STONE, The Physiological Action of Carbolic Acid on the Nervous System, *Phil. Med. Times*, Sept. 27.—MENDEL, The Therapeutic Use of Hyoscyamine in Psychoses, *Allg. Zeitschr. f. Psych.*, XXXVI., II. & III.